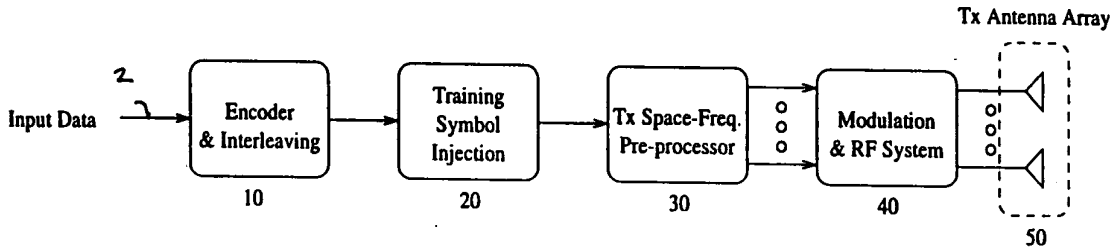

Figure 1

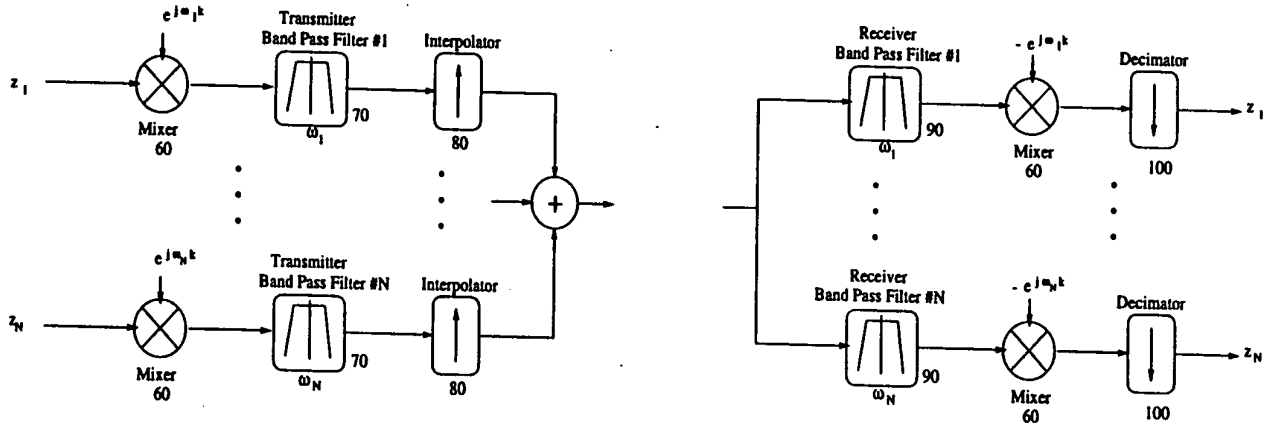

Figure 2

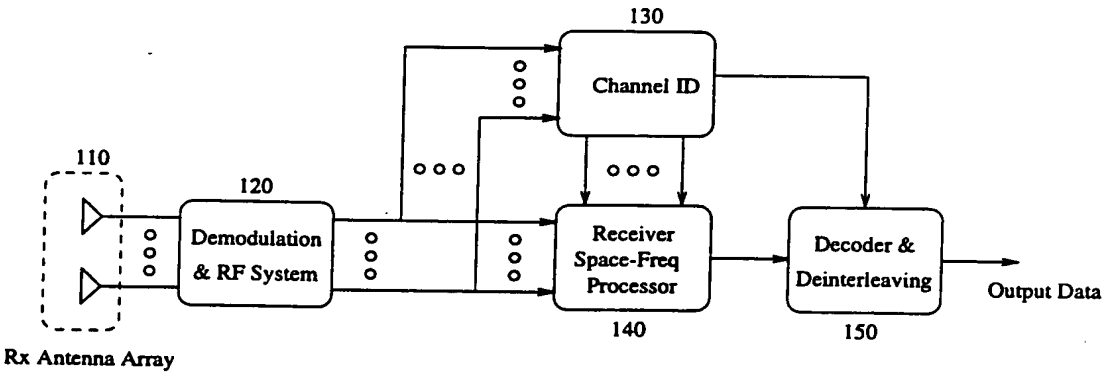
130
Channel ID
110
120
Demodulation
& RF System
Receiver
Space-Freq
Processor
Decoder &
Deinterleaving
Output Data
Rx Antenna Array
140
150

Figure 3

Multipath can be more than one reflected or refracted path in a wireless propagation channel with antenna elements that have one polarization.

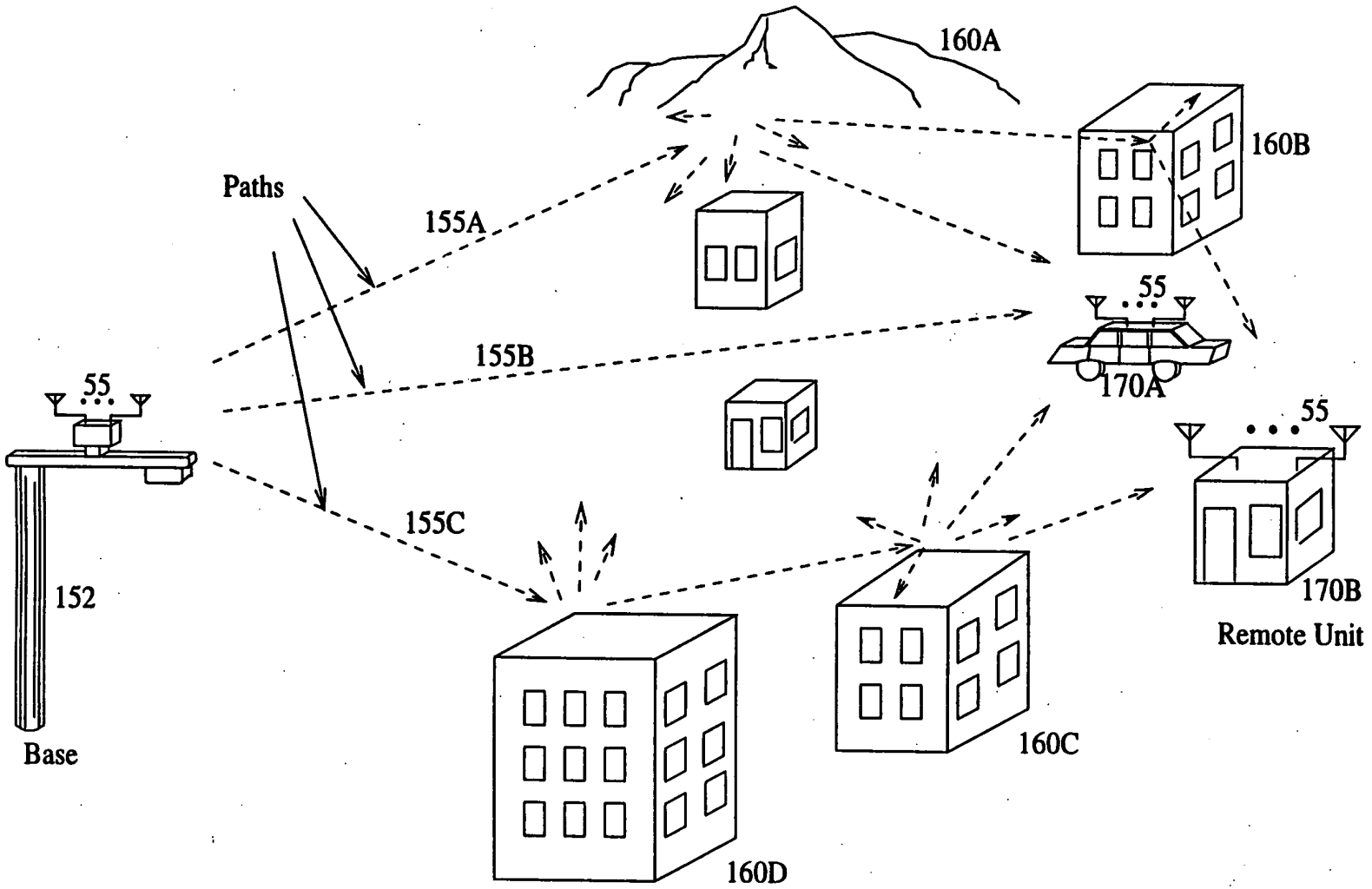

Figure 4

Multipath can be one or more paths with polarization A and one or more paths with polarization B. The two sets of paths may or may not be orthogonal.

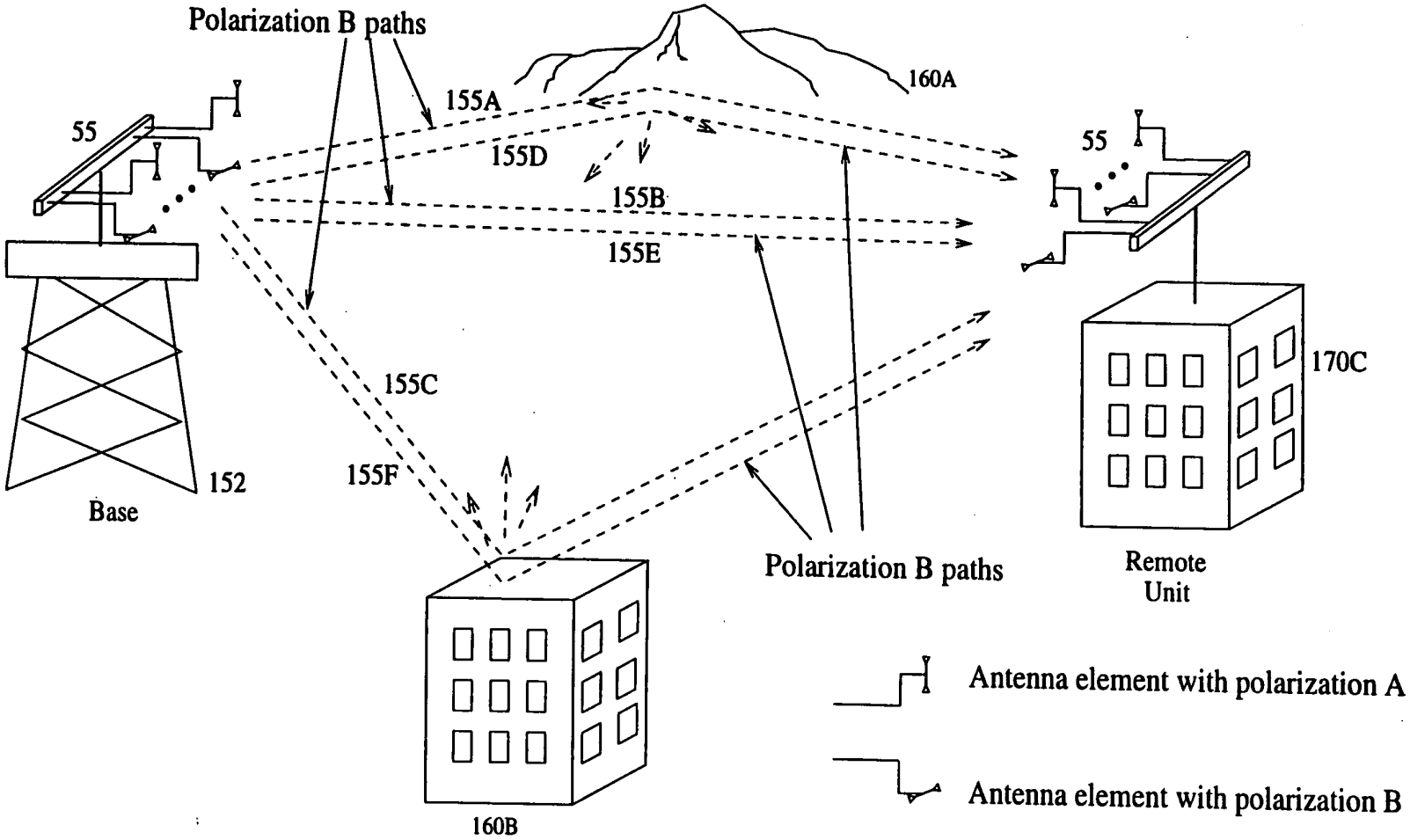

Figure 5

Multipath can be one or more paths between a remote and one radio port and one or more paths between the remote and another radio port.

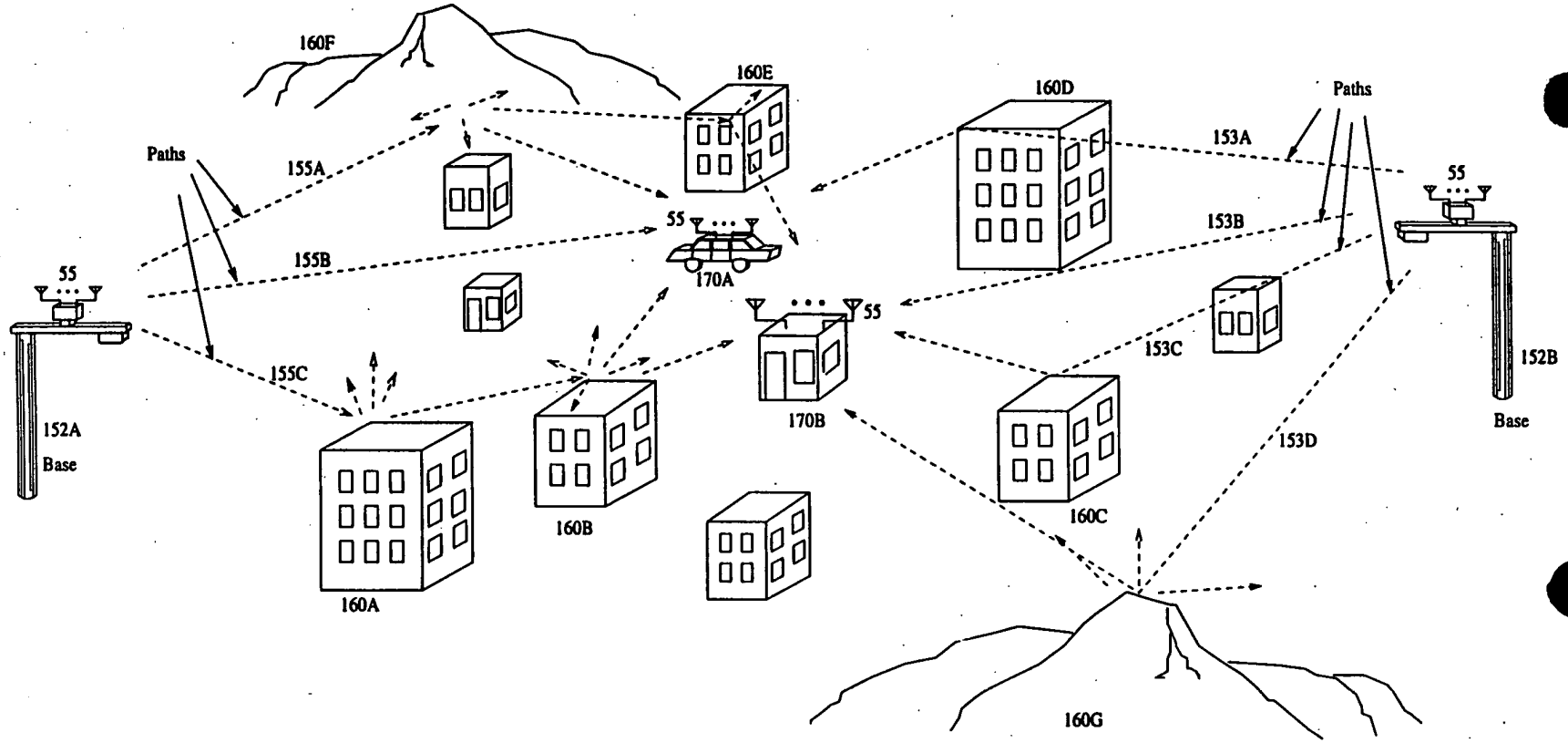

Figure 6

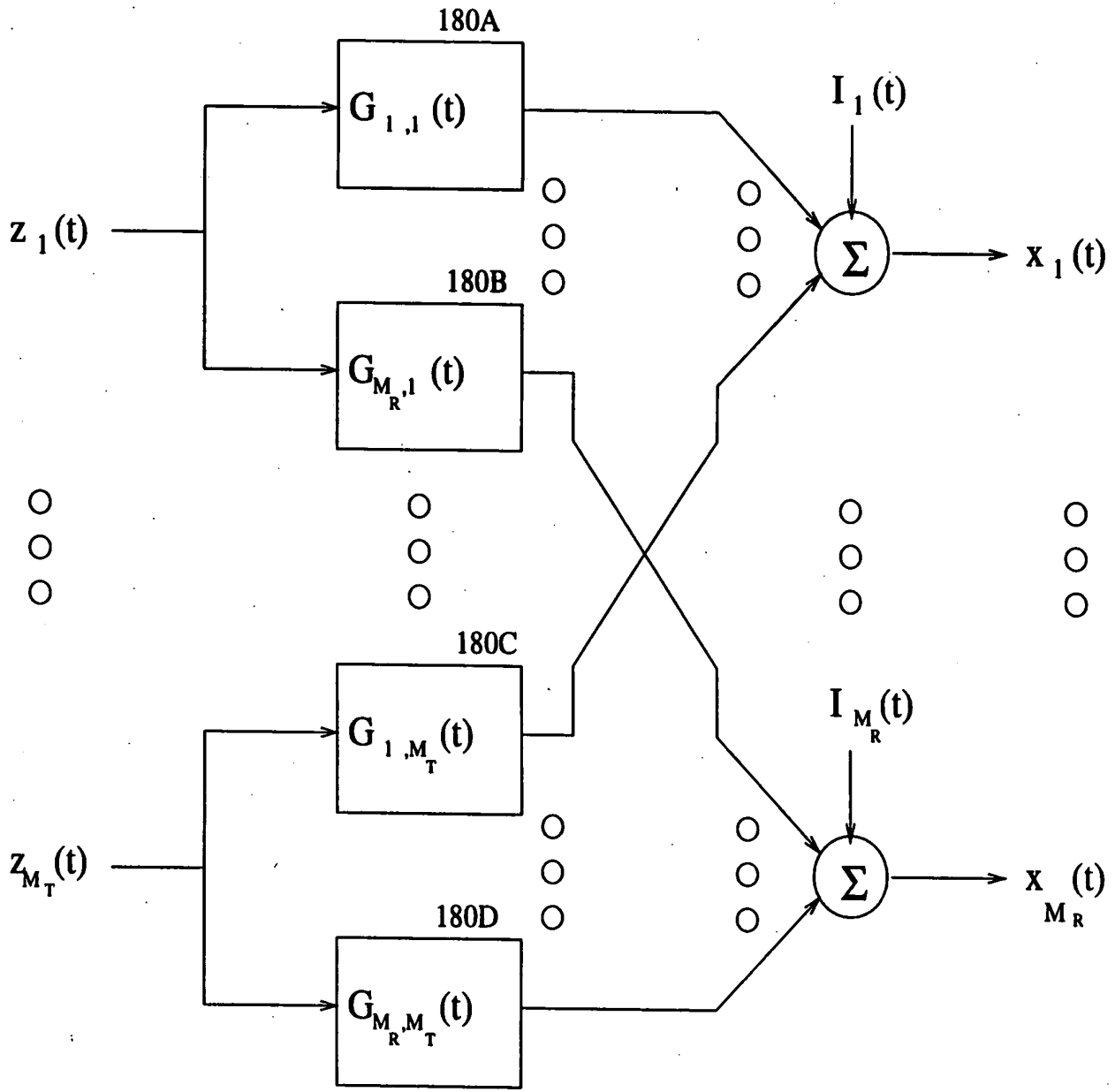

Figure 7

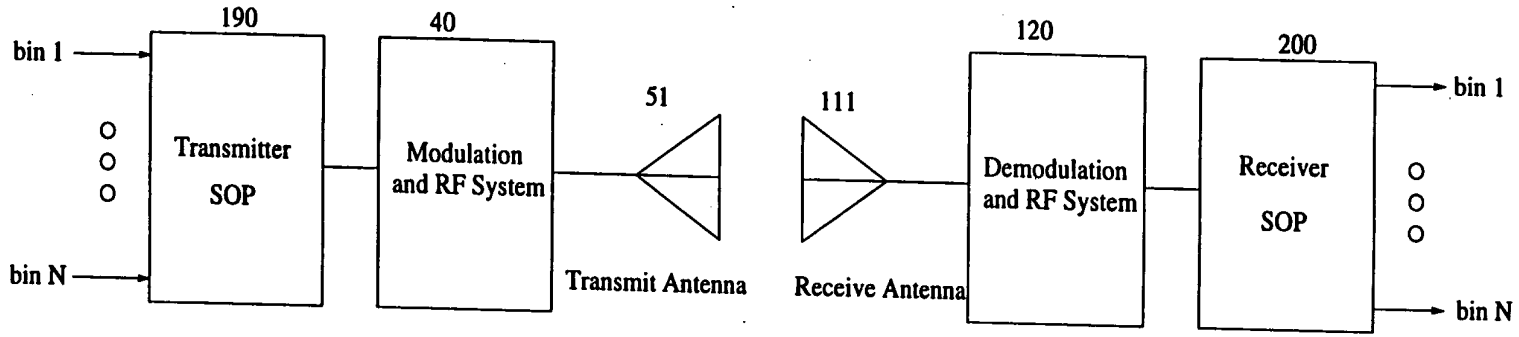
190
40
51
120
200
111
bin 1
bin N
Transmitter
SOP
Modulation
and RF System
Transmit Antenna
Receive Antenna
Demodulation
and RF System
Receiver
SOP
bin 1
bin N

Figure 8

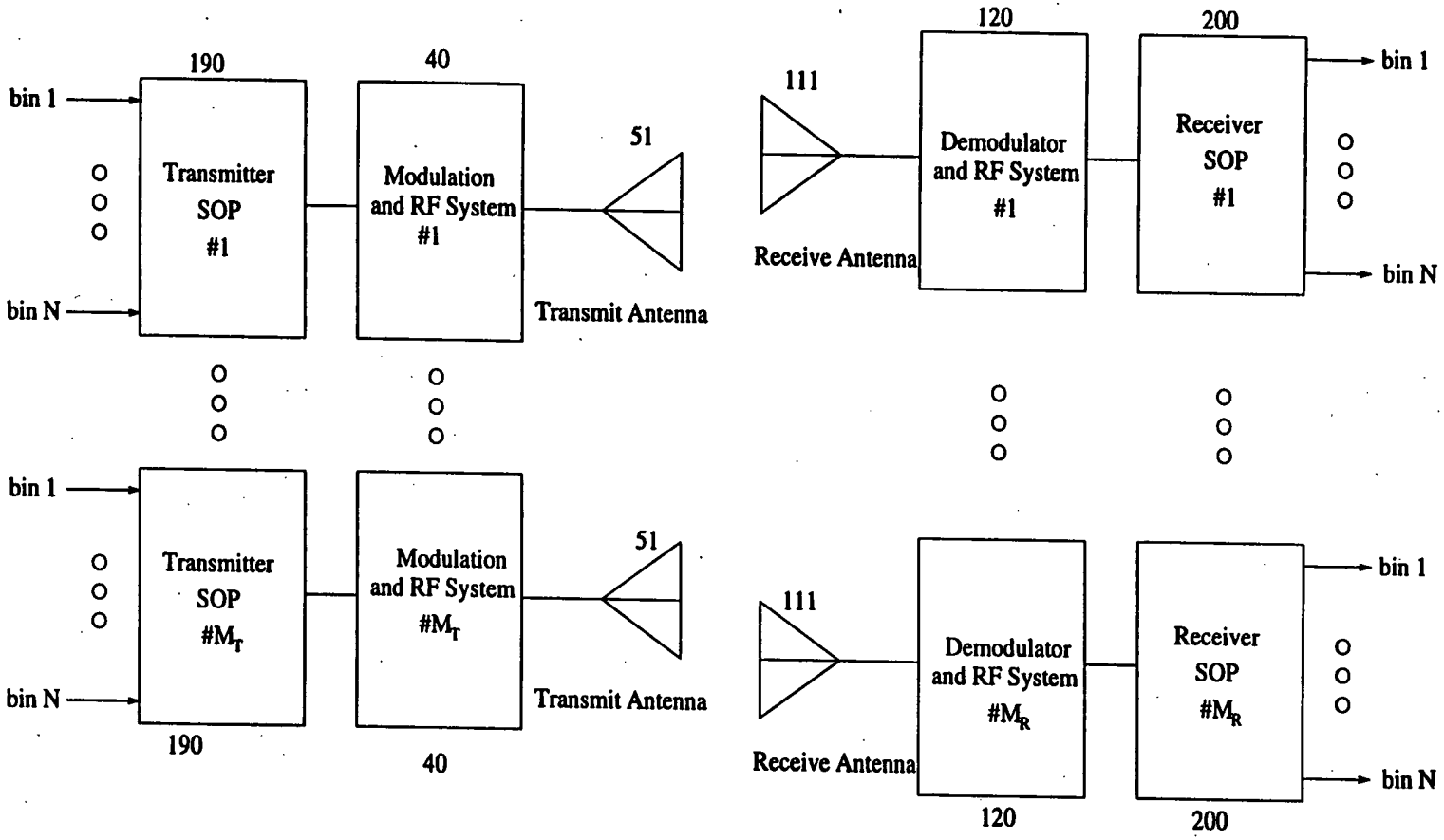

Figure 9

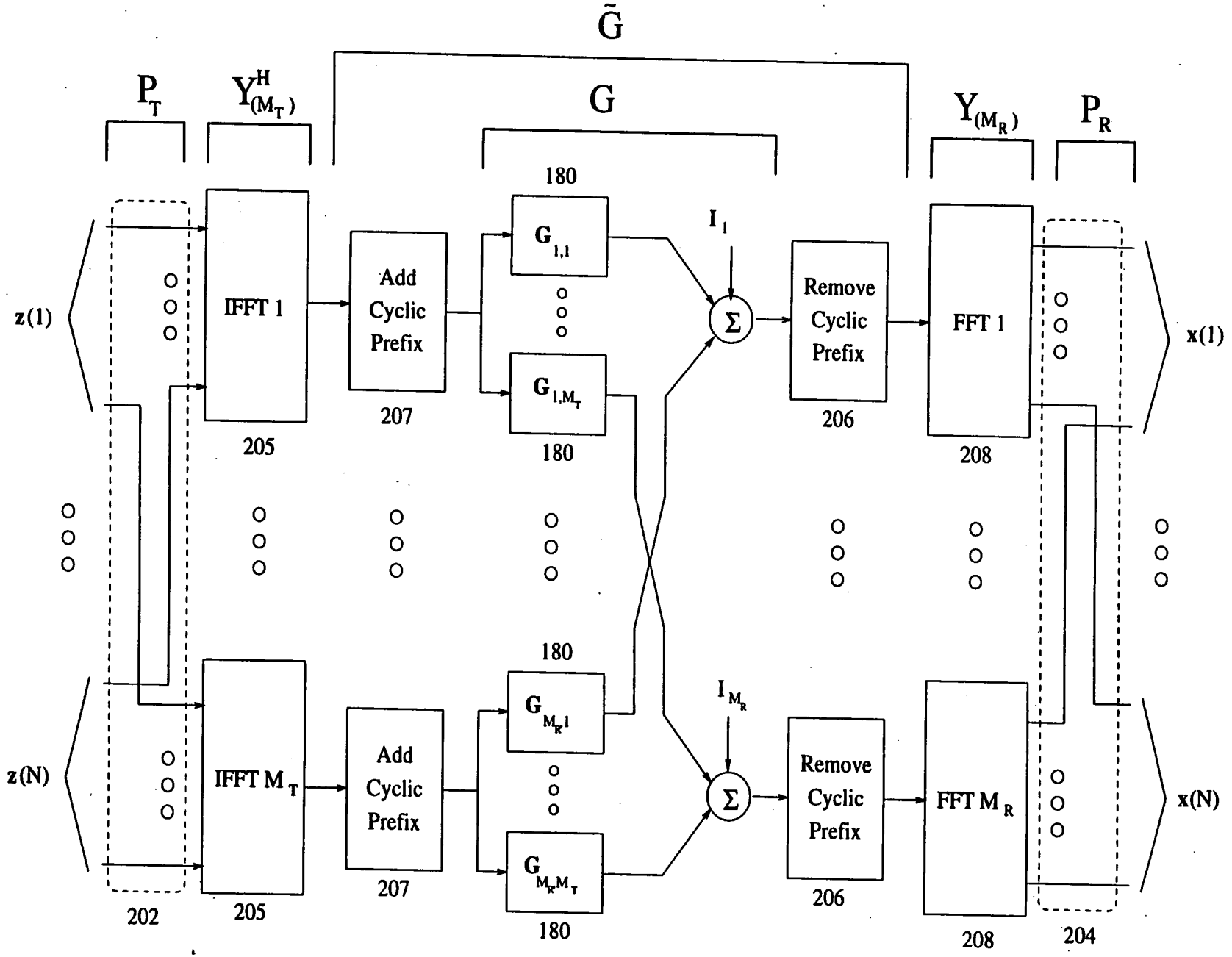

Figure 10

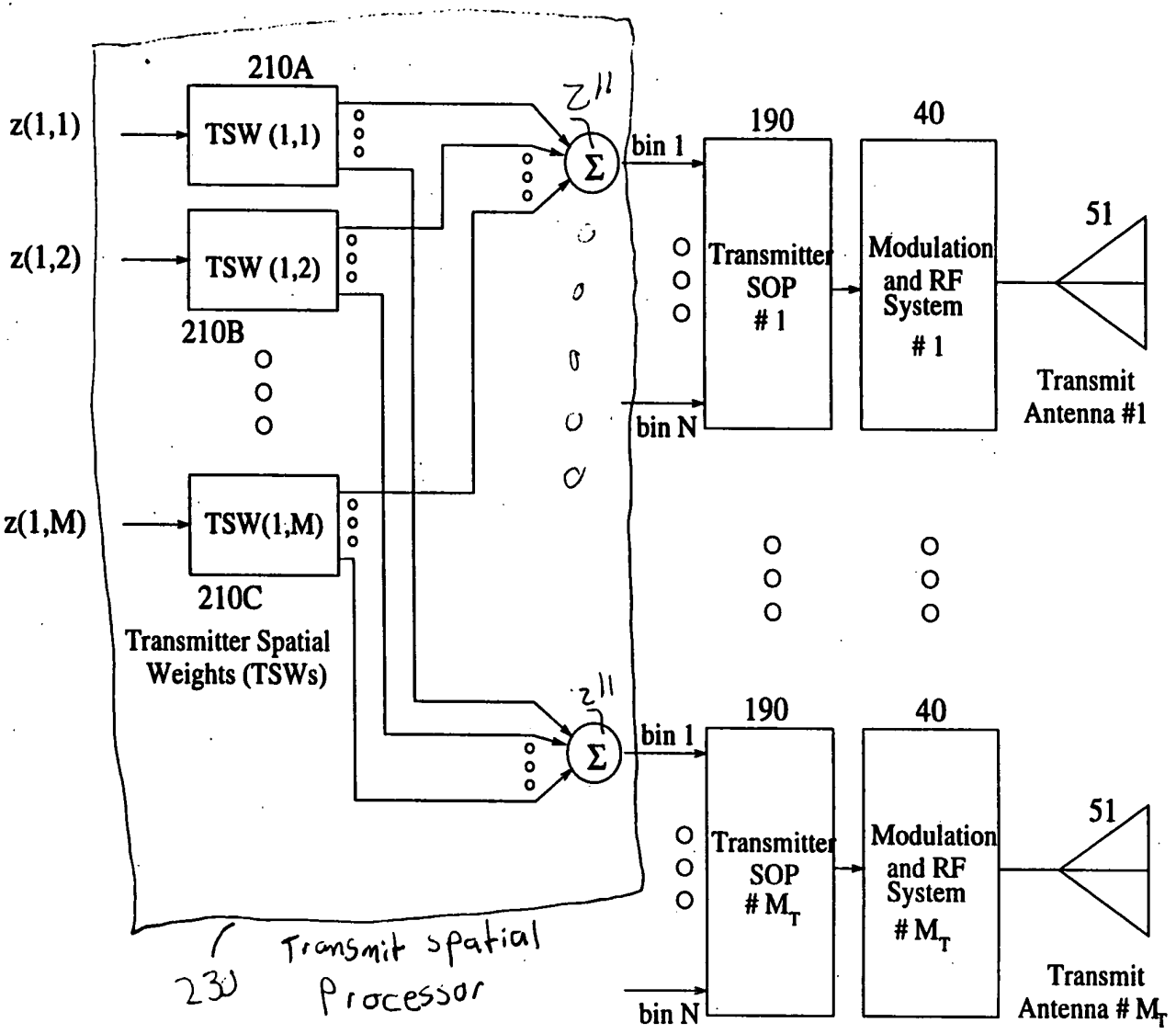

Figure 11

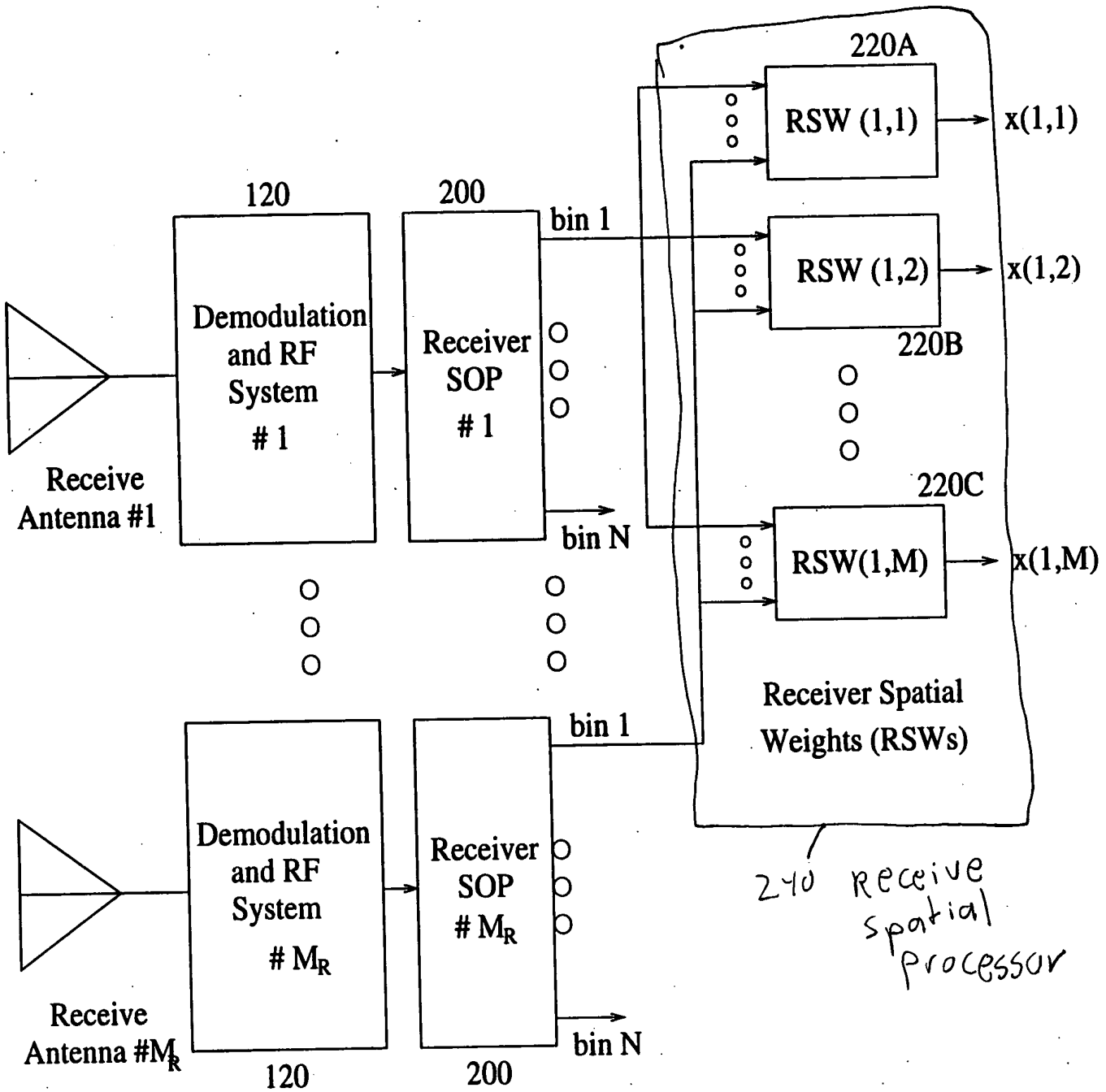

Figure 12

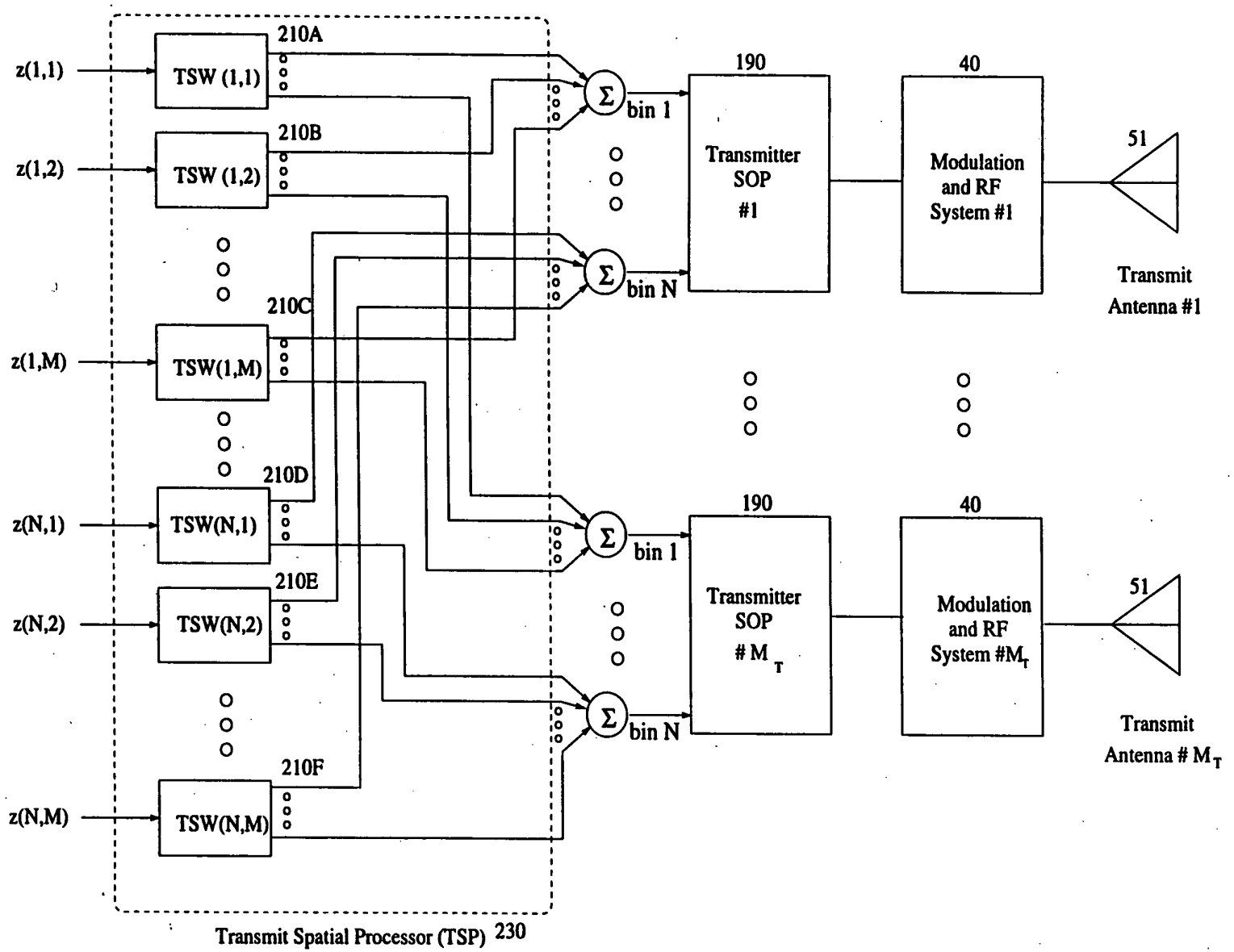

Figure 13

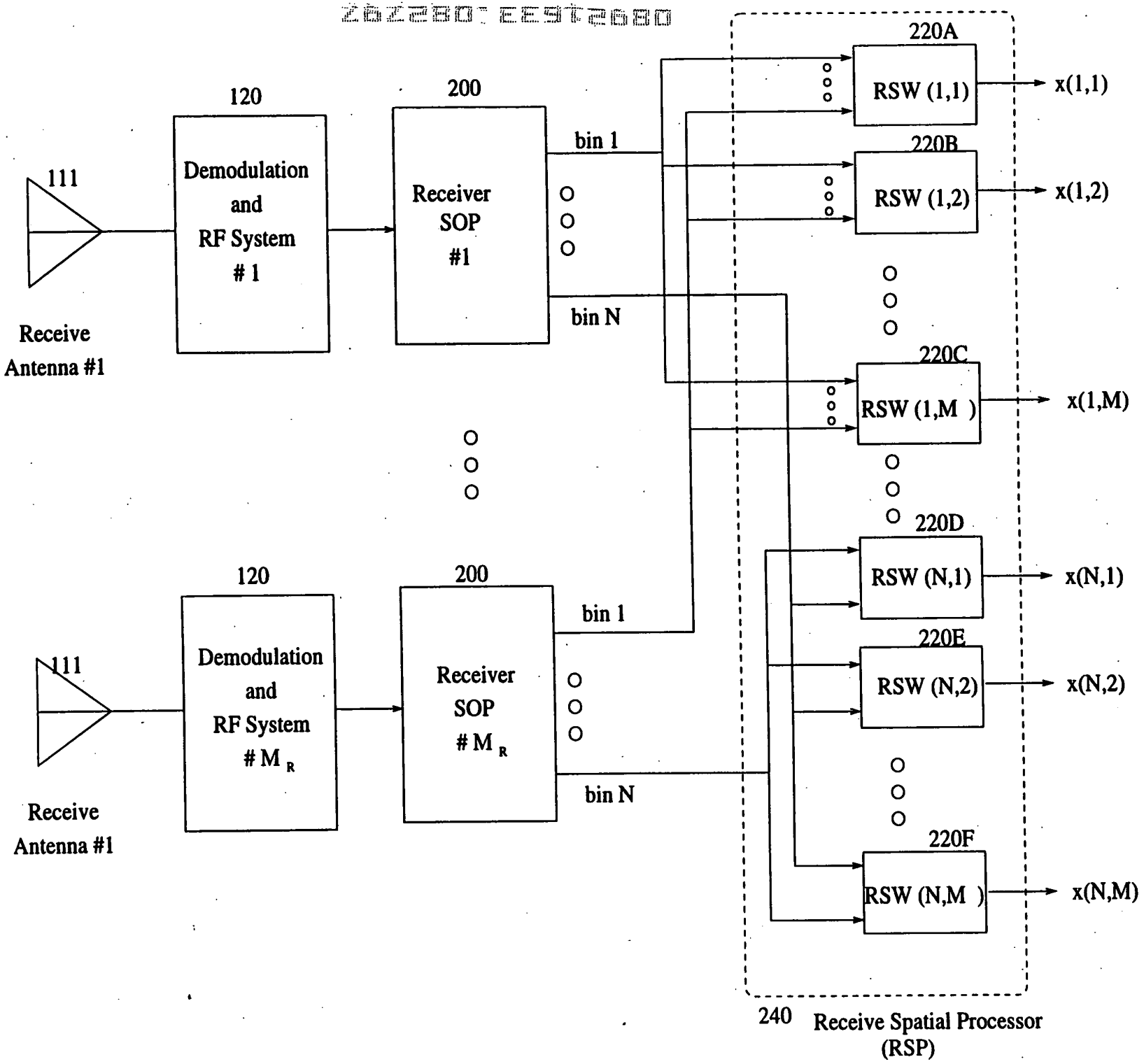

Figure 14

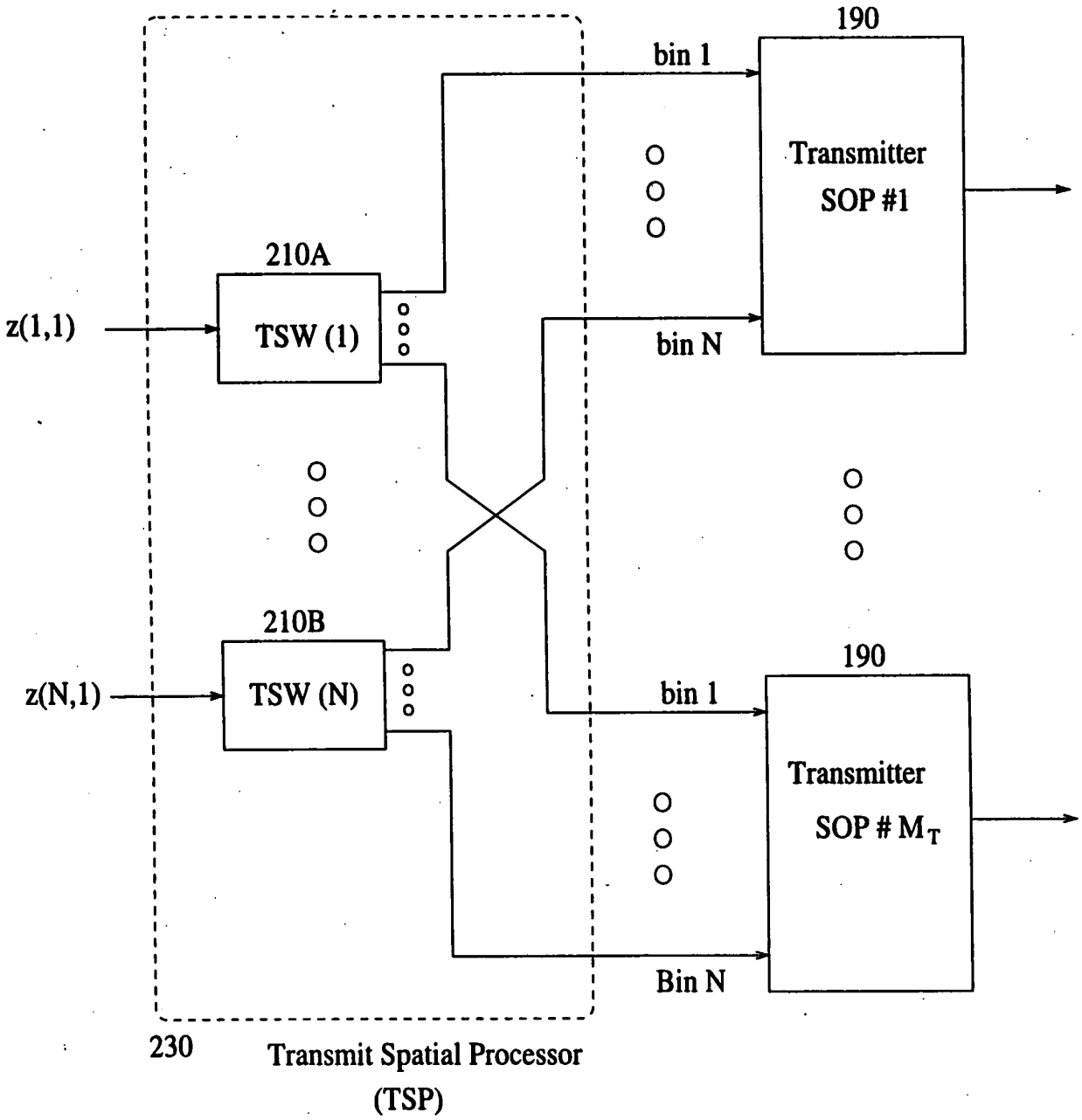

Figure 15

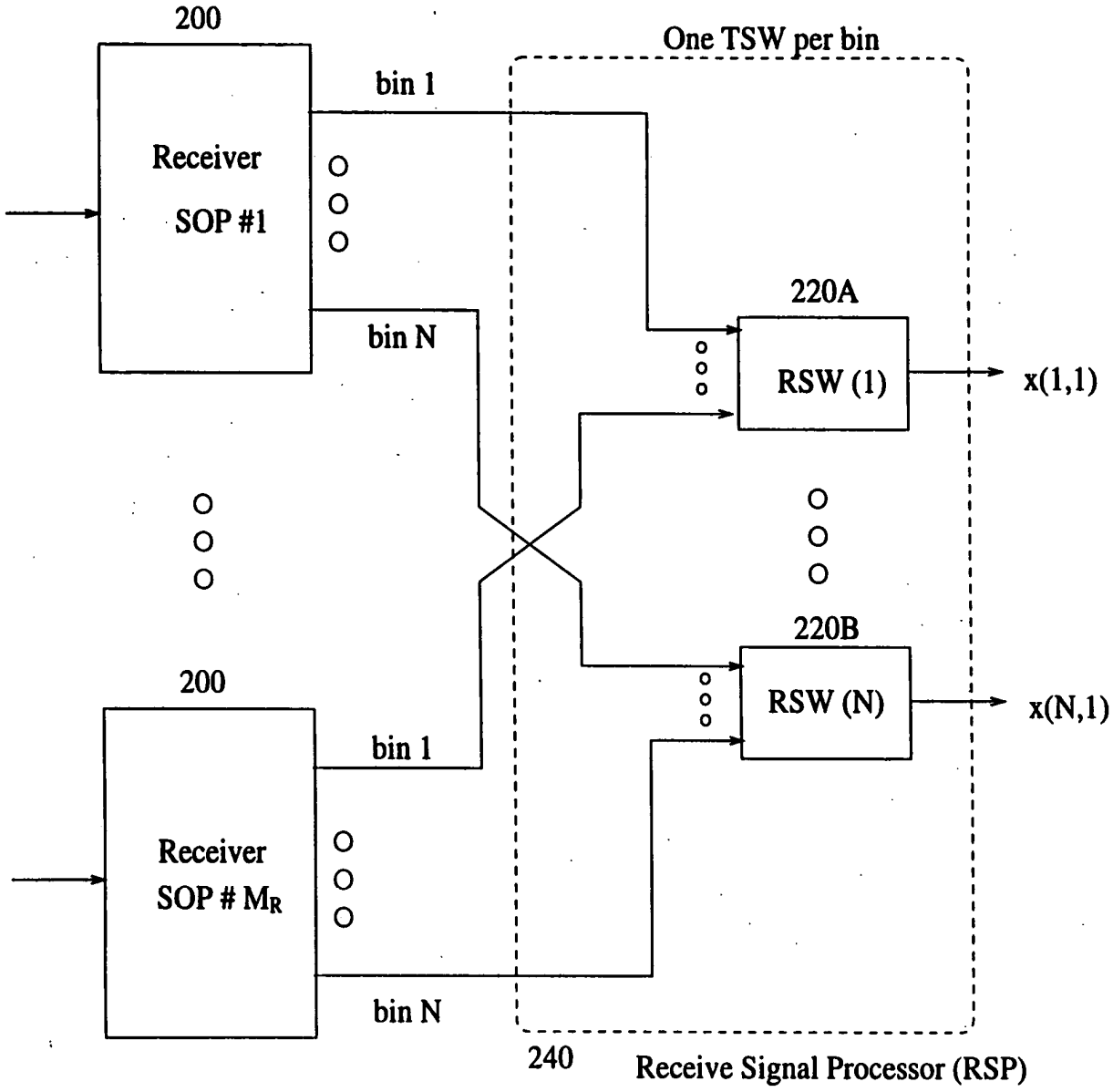
200
One TSW per bin
bin 1
Receiver
SOP #1
bin N
220A
RSW (1)
x(1,1)
220B
RSW (N)
x(N,1)
200
bin 1
Receiver
SOP # M_R
bin N
240
Receive Signal Processor (RSP)

Figure 16

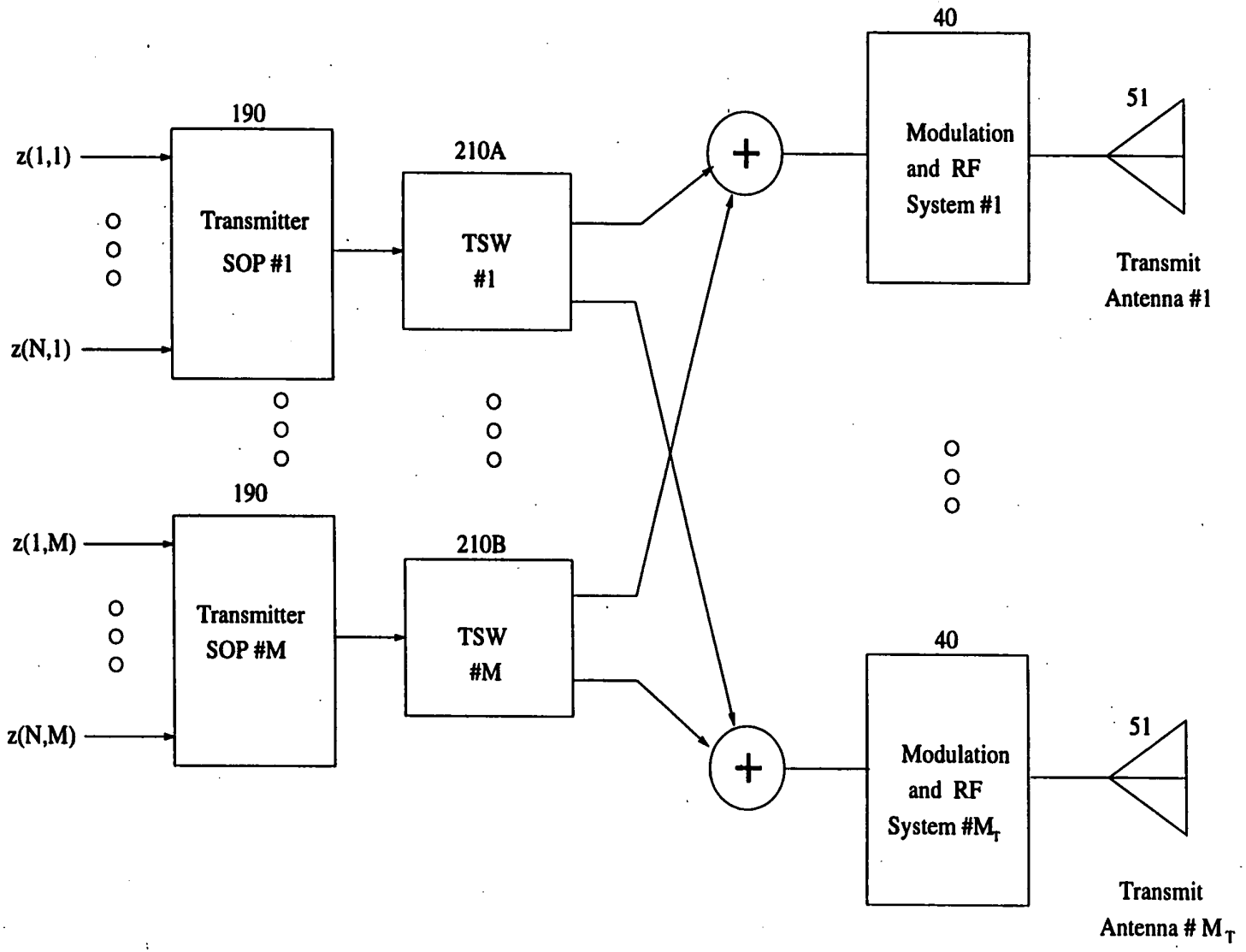

Figure 17

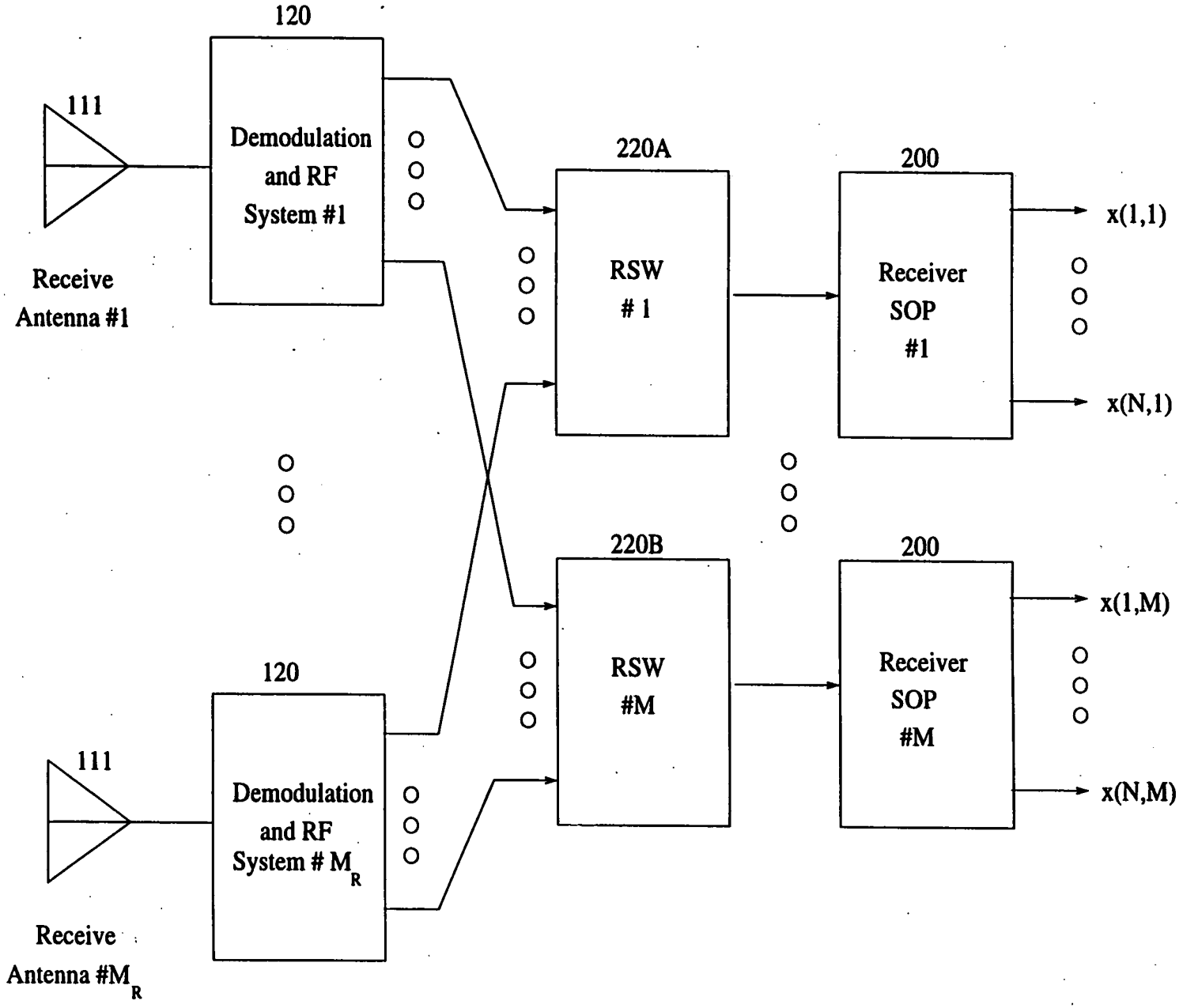
120
111
Demodulation and RF System #1
Receive Antenna #1
220A
RSW # 1
200
Receiver SOP #1
x(1,1)
x(N,1)
220B
RSW #M
200
Receiver SOP #M
x(1,M)
x(N,M)
120
111
Demodulation and RF System # M_R
Receive Antenna #M_R

Figure 18

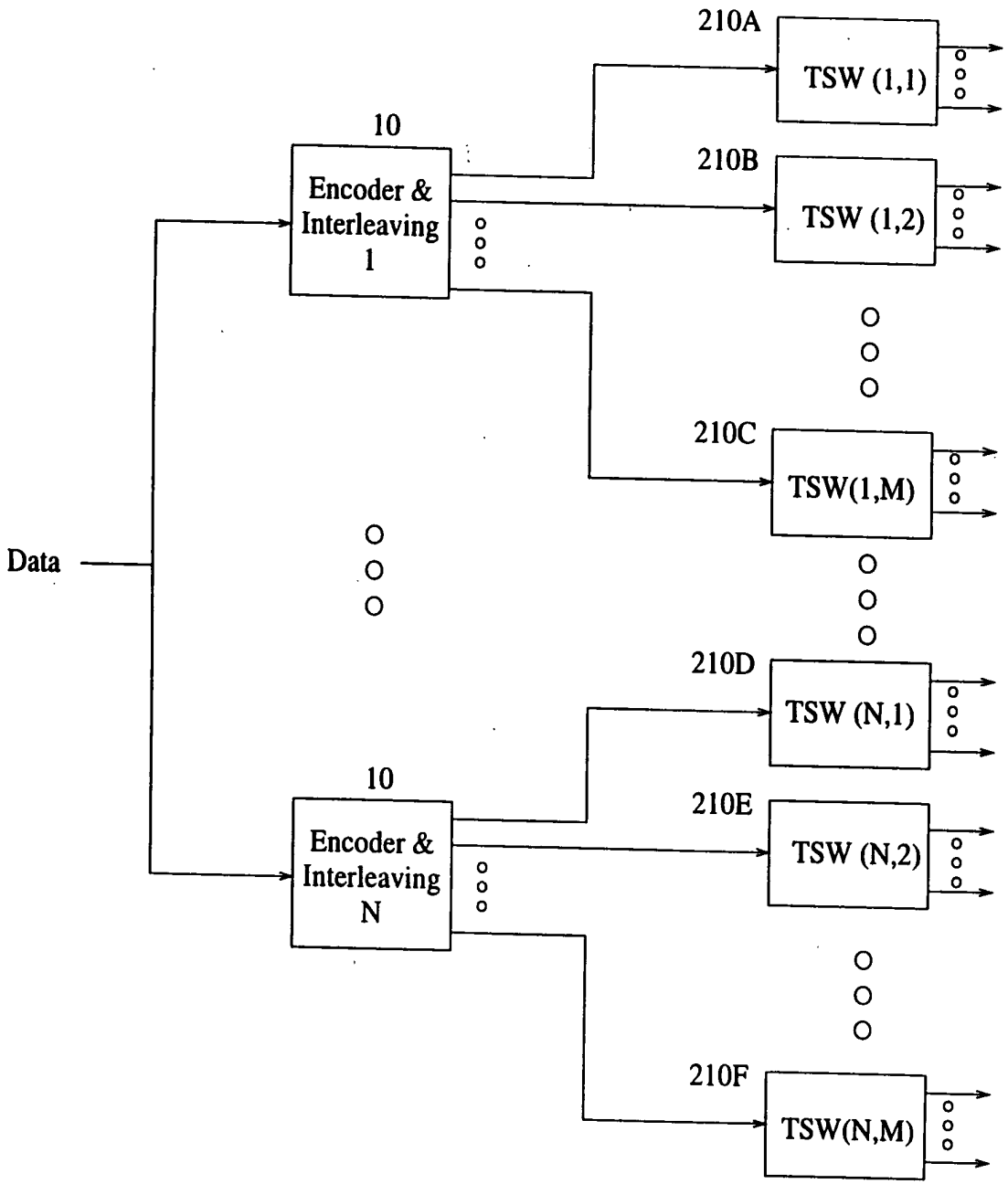

Fig. 19

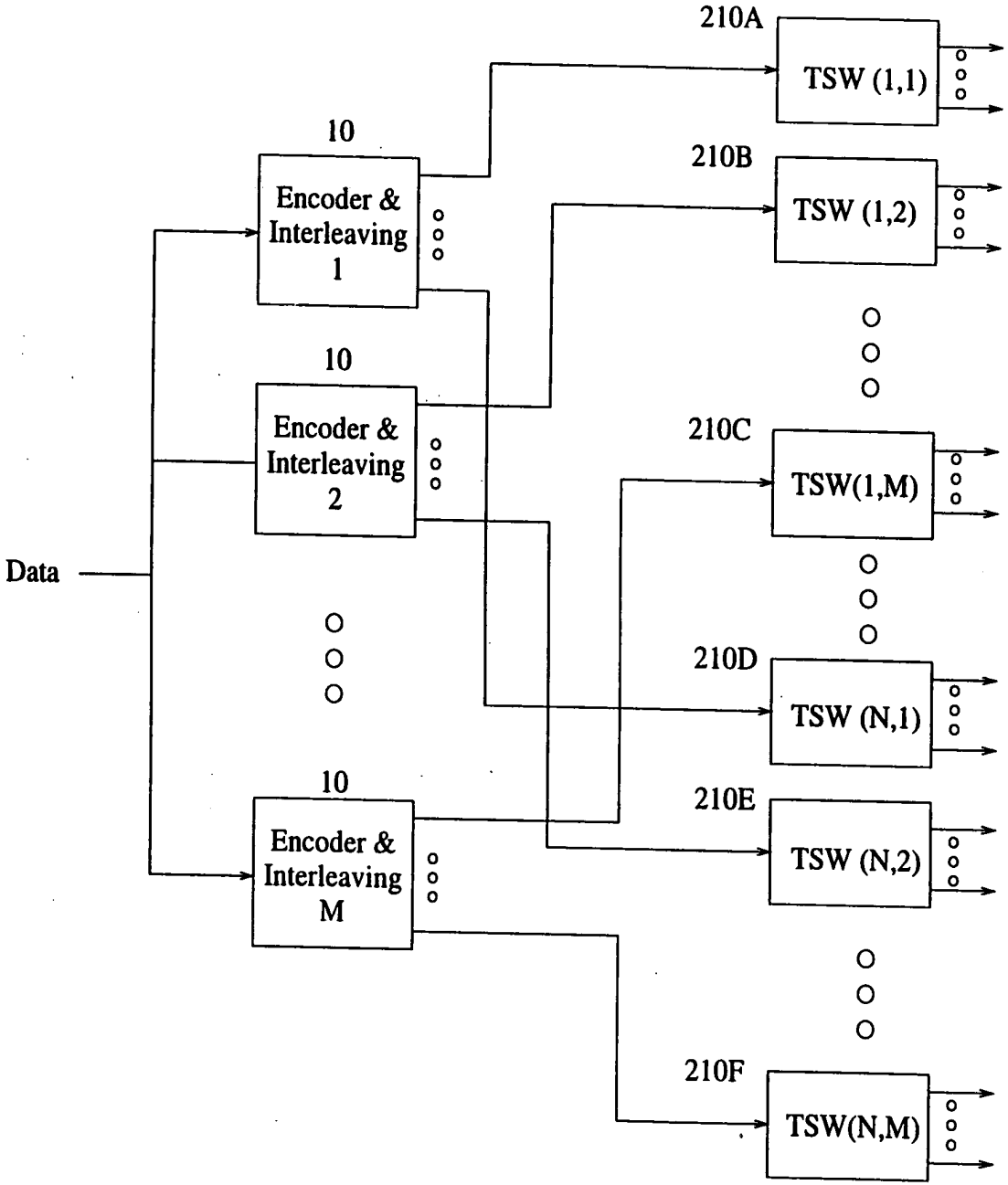
210A
TSW (1,1)
10
Encoder & Interleaving 1
210B
TSW (1,2)
10
Encoder & Interleaving 2
210C
TSW(1,M)
Data
210D
TSW (N,1)
10
Encoder & Interleaving M
210E
TSW (N,2)
210F
TSW(N,M)
Transmitter Spatial Weightings (TSWs)

Fig. 20

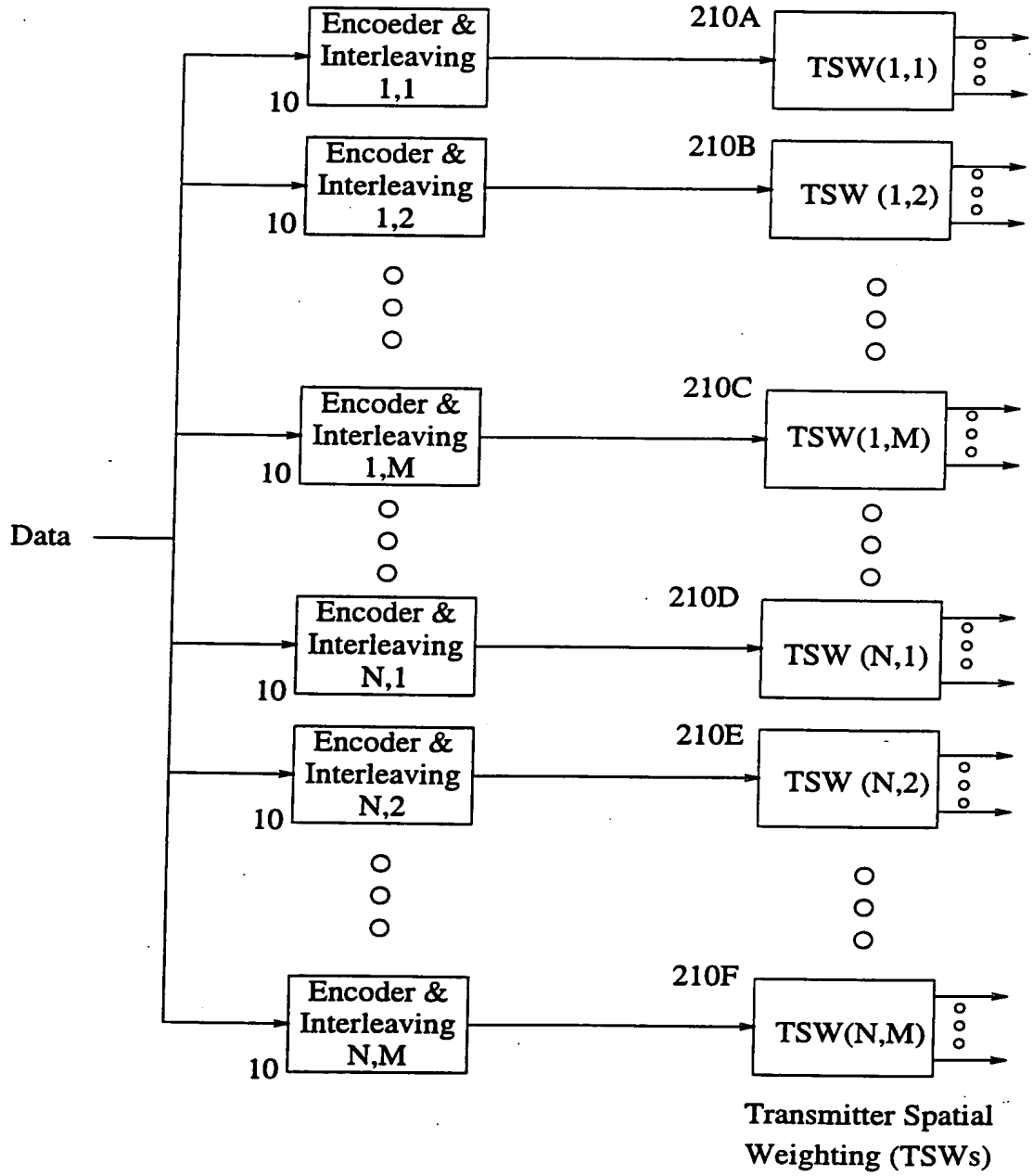
Data
Encoeder & Interleaving 1,1
10
Encoder & Interleaving 1,2
10
Encoder & Interleaving 1,M
10
Encoder & Interleaving N,1
10
Encoder & Interleaving N,2
10
Encoder & Interleaving N,M
10
210A
TSW(1,1)
210B
TSW (1,2)
210C
TSW(1,M)
210D
TSW (N,1)
210E
TSW (N,2)
210F
TSW(N,M)
Transmitter Spatial Weighting (TSWs)

Fig. 21

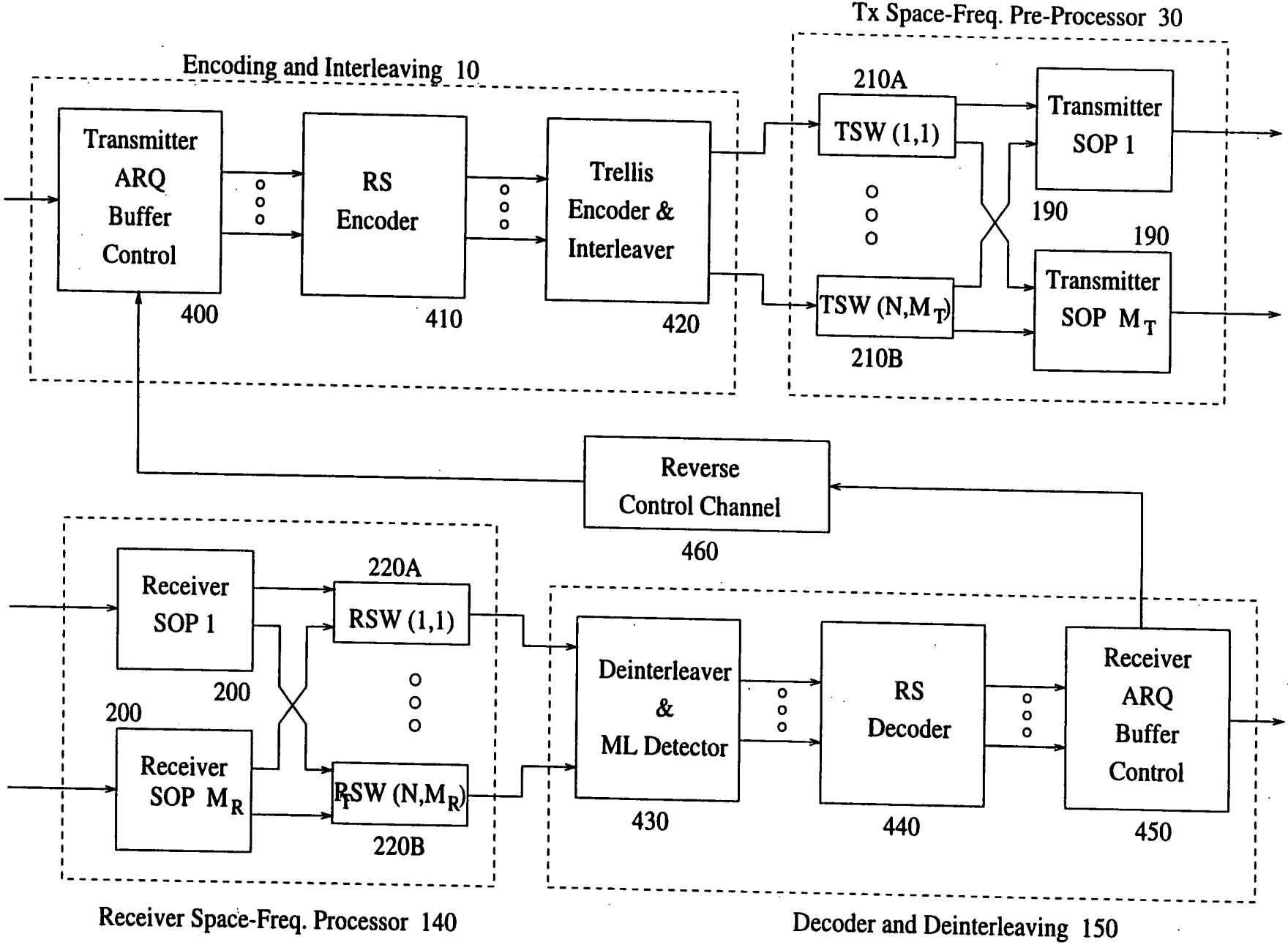

Fig. 22

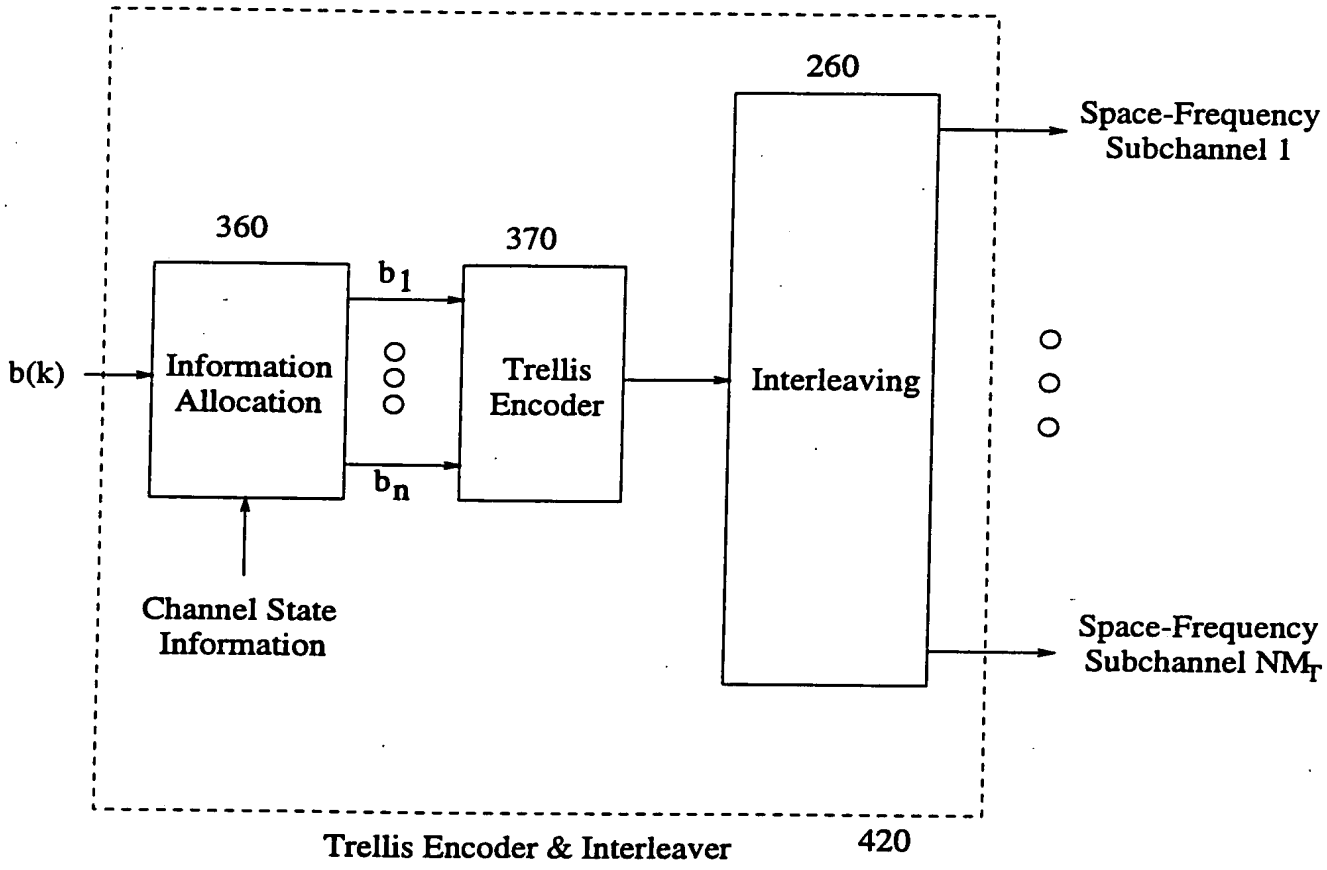
260
Space-Frequency Subchannel 1
360
370
b1
b(k)
Information Allocation
Trellis Encoder
Interleaving
bn
Channel State Information
Space-Frequency Subchannel NMT
Trellis Encoder & Interleaver
420

Fig. 23

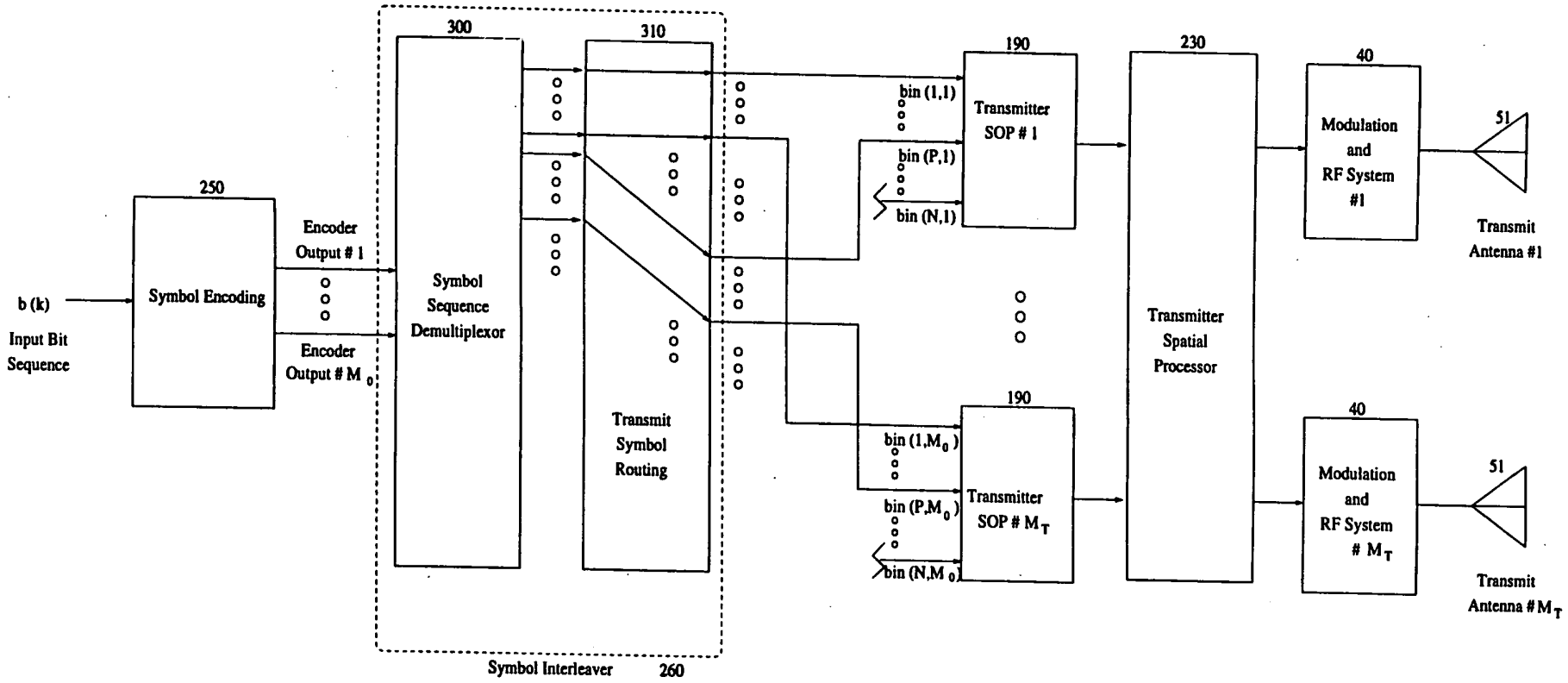

Fig. 24

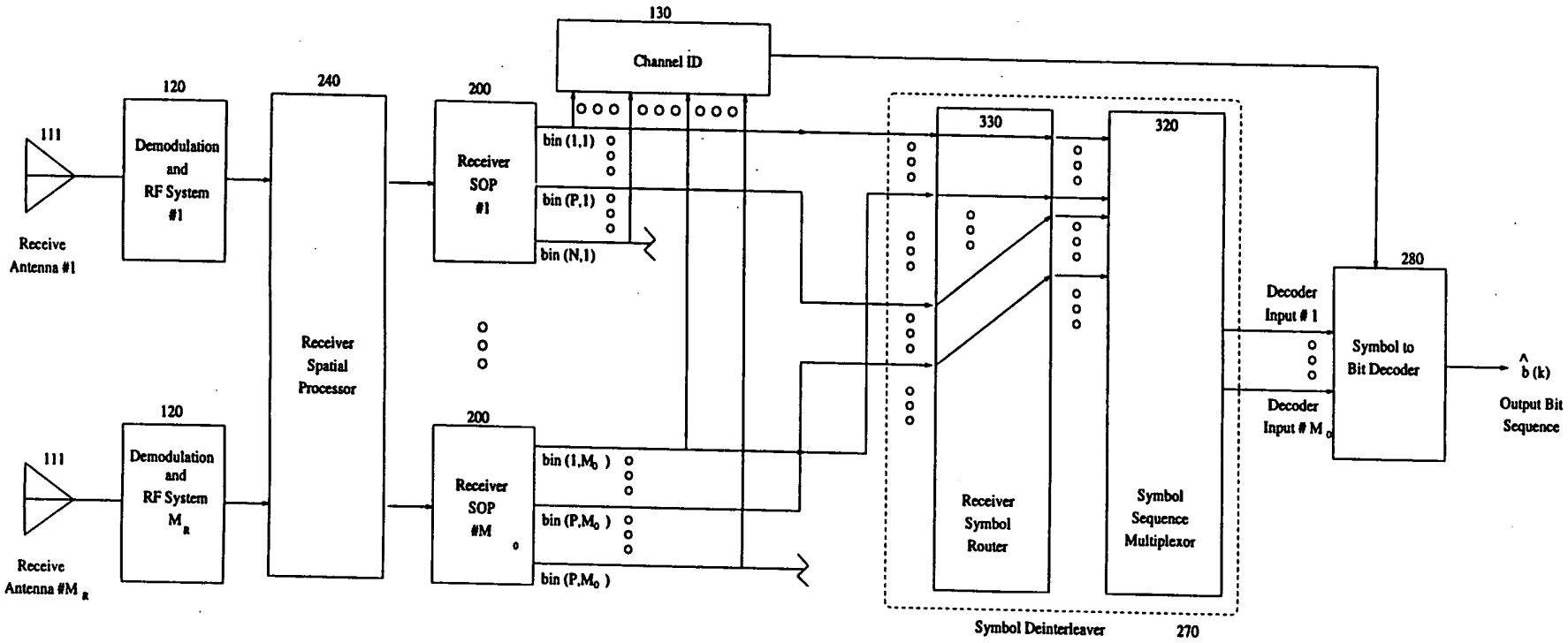

Fig. 25

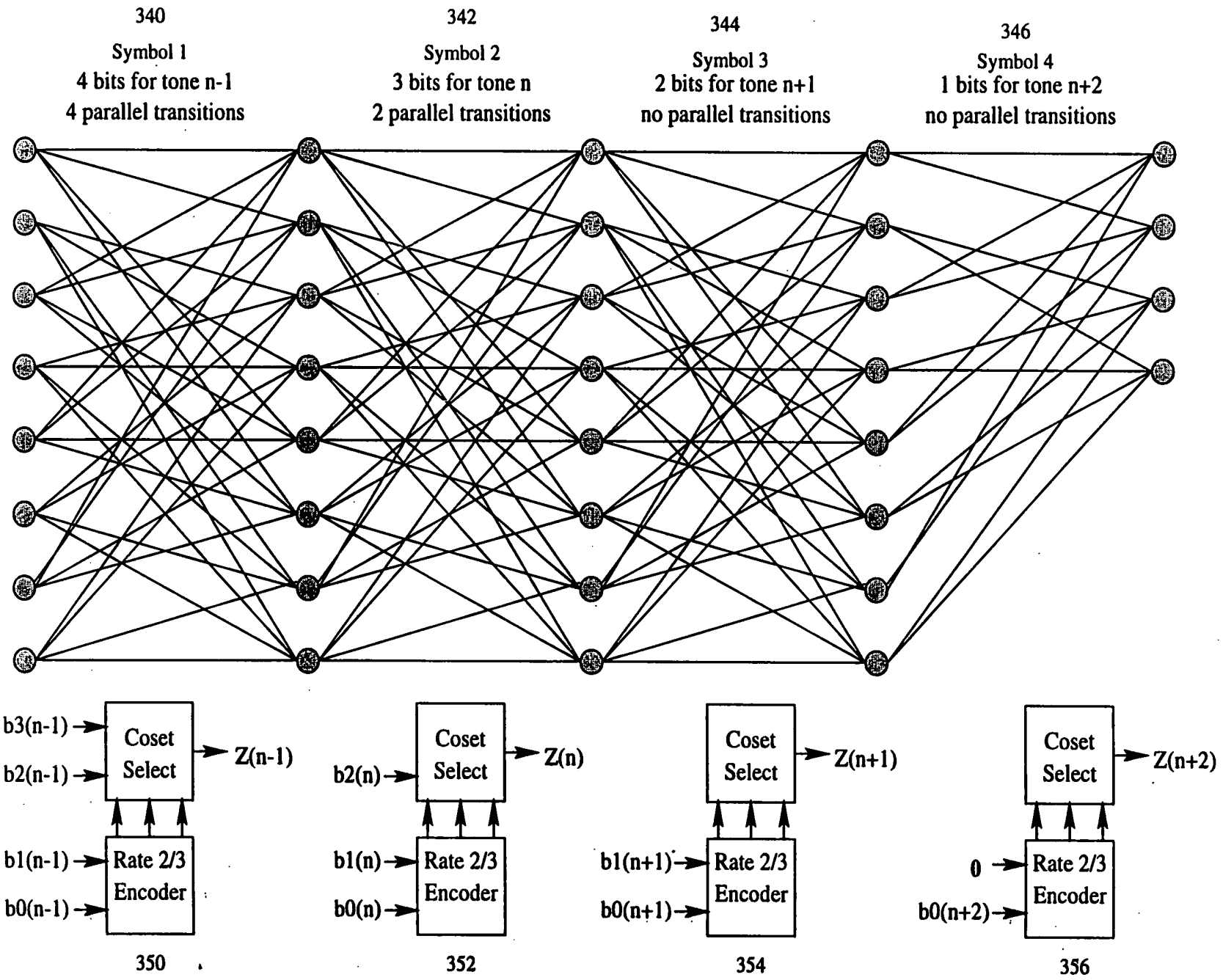

Fig. 26